Calumet College of Saint Joseph

You Belong!

Calumet College of St. Joseph is a Catholic institution of higher learning dedicated to the academic, spiritual and ethical development of undergraduate and graduate students. Informed by the values of its founding religious community, the Missionaries of the Precious Blood (C.PP.S.), the College promotes the inherent dignity of all people, social justice, an ethic of service, student empowerment, opportunity, and lifelong learning.

COURSE SYLLABUS, Summer 2019

MAT 538: MATHEMATICS AND SCIENCE IN THE ELEMENTARY SCHOOL

Instructor Information:	
Instructor Name	Alyssa Rodriguez
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Hours Available:	Wednesday 5 – 6 pm and by appointment

Instructor Background:

Alyssa Rodriguez has a BS in Mathematics Education, a MA in Leadership in Teaching, and is finishing a Ph.D. in Research Methodology. Alyssa teaches research methods at the graduate level, statistics at the undergraduate level, and consults in the areas of general research and data analysis.

Mission of the Education Program:

Respecting the diverse gifts and culture of each student, the Education Program of Calumet College of St. Joseph prepares quality teacher candidates for the 21st Century through a refining process, which ensures: (1) professional preparation; (2) continuous reflection; and (3) ongoing transformation. The Education Program promotes a multicultural community characterized by diversity, integrity, compassion and commitment.

Vision of the Education Program:

Rooted in the Catholic tradition, the Education Program of Calumet College of St. Joseph: (1) values the dignity and worth of each teacher candidate; (2) shapes attitudes and values; (3) strives for social justice; (4) instills sensitivity for the poor and the powerless; and (5) refines professional competency and scholarship in every teacher candidate. At Calumet College of St. Joseph we are committed to developing the natural abilities of our students, refining them into high quality professional educators

Course Information:

Course Time:	April 20: online (Happy Easter) April 27: 8:00 -12:00 and online discussion May 4: 8:00 – 12:00
Classroom:	Rm 308
Prerequisites:	MAT 500, 516, 518
Required Books and Materials:	Supplemental material.

Course Description:

Candidates know, understand and practice the use of central concepts in math and science and structure it in such a way to create meaningful learning experiences that develop students' appreciation and competence in math and science.

Candidates use the major concepts and procedures that define number and operating, algebra, geometry, measurement and data analysis and probability in order to foster student learning and use of patterns, quantities, and spatial relationships that can represent phenomena, solve problems, and deal with data.

Candidates use fundamental concepts of physical, life, and earth/space sciences. Candidates can design and implement age appropriate inquiry lesson to teach science, to build student understanding for personal and social applications, and to convey the nature of science.

Candidates use a variety of resources including technology and collaborate with a teacher to promote learning in math and science. Candidates use Bloom's taxonomy to implement Indiana Academic Standards. Candidates use a variety of teaching strategies that promote the development of critical thinking, problem solving and performance skills. Clinical experiences required.

Clinical Experience Required

3 – 4 day Field Experience

Experiential Learning Opportunities:

Clinical Experience Required (described above).

Program Outcome Objectives:

Five major objectives have been defined under the three pillars: Preparation, Reflection and Transformation.

Program graduates are required to:

1. Demonstrate understanding of how students learn and how they differ
2. Demonstrate knowledge of what to teach
3. Demonstrate how to teach effectively
4. Demonstrate effective implementation of technology
5. Demonstrate continuous personal and professional growth

Course Objectives:

INTASC	Teacher candidates will be able to	ACEI	NBPTS
1	• Examine education reform related to math and science • Examine requirements of a math and science teacher • Apply science and math standards	2.2 , 2.3	2
2	• Teach developmentally appropriate math lesson using developmentally appropriate manipulatives • Prepare and demonstrate a developmentally appropriate unit plans and instruction according INTASC and Indiana Developmental Standards	1.0	1
3	• Align multiple intelligence to learning styles to teaching methods • Develop lesson plans for science and math using a variety of instructional strategies that focus on meeting the needs of different learning styles	3.2	1, 2
4	• Experience and practice a variety of methods for teaching math and science • Utilize Learning Centers to motivate and differentiate learning	3.3	2
5	• Critically examine how to increase math and science performance • Develop and implement techniques for motivating students and creating an organized classroom conducive of learning	3.4	3
6	• Collaborate, reflect and share thoughts and ideas via Blackboard • Utilize smart board, power points, document digital projector and other technologies to communicate and teach lessons	2.1	2
7	• Develop and implement lesson plans for math aligned to Blooms Taxonomy • Develop Lesson Plans for Integrated Math and Science – Using an innovative approach – i.e. technology, visual aids … • Develop a thematic science/math unit plan and project aligned to state standards and all INTASC principles	2.1- 2.5; 3.1	4
8	• Develop and administer classroom assessments to students • Develop lesson based on feedback from assessment • Become aware of school-wide assessments for math and science • Develop a variety of informal, formative and summative assessments	4.0	3, 4
9	• Observe HQT of math and science to gain an understanding of central concepts, tools of inquiry, and the structures of disciplines he or she teaches to create learning experiences that make these aspects of the subject matter meaningful to students • Reflect on how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners • Display a disposition that is appropriate for a teacher • Team teach with HQT • Observe and discuss teaching methods w HQT	5.1	4, 5

10	• Reflect on resources such as field trips and guest speakers that are available in the community. Align Indiana Academic Standards to developmentally appropriate field trips • Develop developmentally appropriate science/math field trips aligned to Indiana Academic Standards • Participate and present developmentally appropriate field trips for math and science aligned to state standards	5.2	5	

Schedule

Saturday 5/18/19 **Online**	**Saturday 5/25/19** **8:00 – 2:00 pm**	**Saturday 6/1/19** **8:00 – 2:00**
• Teaching strategies in Science • Inquiry in STEM Lessons • Science Standards	• Math Activity • Teaching Strategies in Mathematics • Math Standards • Using manipulatives	• Field trips • Science Demonstrations • NCTM and NSTA • Clinical Experience o Teach lesson o Peer observation

I reserve the right to change this schedule to meet the needs of the class.

Assessments:

Science 5E lesson plan	10% of grade
Math lesson plan	10% of grade
Teaching reflection	10% of grade
Observation reports	10% of grade
Science demonstration	10% of grade
6-day math unit plan	20% of grade
6-day science unit plan	20% of grade
Participation	10% of grade

Grading Scale: (given as a percent of total possible points)

A: 93-100	A-: 90-92	
B+: 87-89	B: 83-86	B-: 80-82
C+: 77-79	C: 73-76	C-: 70-72
D+: 67-69	D: 63-66	D-: 60-62
F: below 60		

Responsibilities

Attending Class	Intellectual growth and success in college is reinforced through interaction in the classroom. Students reach personal goals and course outcomes through regular and prompt attendance. Master of Arts in Teaching (MAT) *[are intense and rigorous and demand student presence and participation.]* Therefore, if a student is

	absent "(1) times" the student will be subjected to a grade of F or FW per policy stated under the Withdrawal from Classes section on this syllabus.
Turning In Your Work	You cannot succeed in this class if you do not turn in all your work on the day it is due. Late work will be accepted under special circumstances; in such cases, your score will decrease 1% each day for the first 7days, and 10% each subsequent week.
CCSJ Student Honor Code	This course asks students to reaffirm the CCSJ Student Honor Code: I, as a student member of the Calumet College academic community, in accordance with the college's mission and in a spirit of mutual respect, pledge to: • Continuously embrace **honesty and curiosity** in the pursuit of my educational goals; • Avoid all behaviors that could impede or distract from the academic progress of myself or other members of my **community**; • Do my own work with **integrity** at all times, in accordance with syllabi, and without giving or receiving inappropriate aid; • Do my utmost to act with commitment, inside and outside of class, to the goals and **mission** of Calumet College of St. Joseph.
Using Electronic Devices	Electronic devices can only be used in class for course-related purposes. If you text or access the Internet for other purposes, you may be asked to leave, in which case you will be marked absent.
Participating in Class	You must be on time, stay for the whole class and speak up in a way that shows you have done the assigned reading. If you are not prepared for class discussion, you may be asked to leave, in which case you will be marked absent.
Doing Your Own Work	If you turn in work that is not your own, you are subject to judicial review, and these procedures can be found in the College Catalog and the Student Planner. The maximum penalty for any form of academic dishonesty is dismissal from the College. Using standard citation guidelines, such as MLA or APA format, to document sources avoids plagiarism. The Library has reference copies of each of these manuals, and there are brief checklists in your Student Handbook and Planner. **PLEASE NOTE:** All papers may be electronically checked for plagiarism.
Sharing Your Class Experience	At the end of the term, you will have the opportunity to evaluate your classroom experience. These confidential surveys are ***essential*** to our ongoing efforts to ensure that you have a great experience that leaves you well prepared for your future. Take the time to complete your course evaluations – we value your feedback!
Withdrawing from Class	After the last day established for class changes has passed (see the College calendar), you may withdraw from a course by following the policy outlined in the CCSJ Course Catalog.

Resources	
Student Success Center:	The Student Success Center provides faculty tutors at all levels to help you master specific subjects and develop effective learning skills. It is open to all students at no charge. You can contact the Student Success Center at 219 473-4287 or stop by the Library.

Disability Services:	Disability Services strives to meet the needs of all students by providing academic services in accordance with Americans with Disabilities Act (ADA) guidelines. If you believe that you need a "reasonable accommodation" because of a disability, contact the Disability Services Coordinator at 219-473-4349.
Student Assistance Program	This free and confidential counseling service is available on-campus to help you deal with personal issues. The counseling office is in Room 301. You can reach them at 219 473-4362 (on campus) or 219-736-4067.
CCSJ Alerts:	Calumet College of St. Joseph's emergency communications system will tell you about emergencies, weather-related closings, or other incidents via text, email, or voice messages. Please sign up for this important service annually on the College's website at: http://www.ccsj.edu/alerts/index.html.

Emergency Procedures

MEDICAL EMERGENCY

EMERGENCY ACTION
1. Call 911 and report incident. 2. Do not move the patient unless safety dictates. 3. Have someone direct emergency personnel to patient. 4. If trained: Use pressure to stop bleeding. 5. Provide basic life support as needed.

FIRE

EMERGENCY ACTION
1. Pull alarm (located by EXIT doors). 2. Leave the building. 3. Call 911 from a safe distance, and give the following information: • Location of the fire within the building. • A description of the fire and how it started (if known)

BUILDING EVACUATION

1. All building evacuations will occur when an alarm sounds and/or upon notification by security/safety personnel. **DO NOT ACTIVATE ALARM IN THE EVENT OF A BOMB THREAT.**
2. If necessary or if directed to do so by a designated emergency official, activate the building alarm.
3. When the building evacuation alarm is activated during an emergency, leave by the nearest marked exit and alert others to do the same.
4. Assist the disabled in exiting the building! Remember that the elevators are reserved for persons who are disabled. **DO NOT USE THE ELEVATORS IN CASE OF FIRE. DO NOT PANIC.**
5. Once outside, proceed to a clear area that is at least 500 feet away from the building. Keep streets, fire lanes, hydrant areas and walkways clear for emergency vehicles and personnel. The assembly point is the sidewalk in front of the college on New York Avenue.
6. **DO NOT RETURN** to the evacuated building unless told to do so by College official or emergency responders.

IF YOU HAVE A DISABILITY AND ARE UNABLE TO EVACUATE:
Stay calm, and take steps to protect yourself. If there is a working telephone, call 911 and tell the emergency dispatcher where you are **or** where you will be moving. If you must move,

1. Move to an exterior enclosed stairwell.
2. Request persons exiting by way of the stairway to notify the Fire Department of your location.
3. As soon as practical, move onto the stairway and await emergency personnel.
4. Prepare for emergencies by learning the locations of exit corridors and enclosed stairwells. Inform professors, and/or classmates of best methods of assistance during an emergency.

HAZARDOUS MATERIAL SPILL/RELEASE

EMERGENCY ACTION
1. Call 911 and report incident. 2. Secure the area. 3. Assist the injured. 4. Evacuate if necessary.

TORNADO

EMERGENCY ACTION
1. Avoid automobiles and open areas. 2. Move to a basement or corridor. 3. Stay away from windows. 4. Do not call 911 unless you require emergency assistance.

SHELTER IN PLACE

EMERGENCY ACTION
1. Stay inside a building. 2. Seek inside shelter if outside. 3. Seal off openings to your room if possible. 4. Remain in place until you are told that it is safe to leave.

BOMB THREATS

EMERGENCY ACTION
1. Call 911 and report incident. 2. If a suspicious object is observed (e.g. a bag or package left unattended): • Don't touch it! • Evacuate the area.

TERRORISM AND ACTIVE SHOOTER SITUATIONS

EMERGENCY ACTION
1. Call 911 and report intruder.

RUN, HIDE OR FIGHT TIPS:

1. **Prepare** – frequent training drills to prepare the most effectively.
2. **Run and take others with you** – learn to stay in groups if possible.
3. **Leave the cellphone.**

4. **Can't run? Hide** – lock the door and lock or block the door to prevent the shooter from coming inside the room.
5. **Silence your cellphone** -- use landline phone line.
6. **Why the landline?** It allows emergency responders to know your physical location.
7. **Fight** – learn to "fight for your life" by utilizing everything you can use as a weapon.
8. **Forget about getting shot – fight**! You want to buy time to distract the shooter to allow time for emergency responders to arrive.
9. **Aim high** – attack the shooter in the upper half of the body: the face, hands, shoulder, neck.
10. **Fight as a group** – the more people come together, the better the chance to take down the shooter.
11. **Whatever you do, do something** – "react immediately" is the better option to reduce traumatic incidents.